

### REMARKS

Applicant requests reconsideration of their application in view of the foregoing amendments and the discussion that follows. The status of the claims as of this response is as follows: Claims 1-53 were pending in the above-mentioned patent application and stand rejected. Claims 2-3 and 51 have been canceled herein and Claims 1, 16, 24, 28, 33, 43, 45, 48, 49, 50 and 53 have been amended herein.

#### The Amendments

The specification has been amended to correct the reference to Fig. 6 (initially referred to as Fig. 6A and Fig. 6B). Support therefor is in the specification, for example, in the original paragraphs and in original Fig. 6A and Fig. 6B.

Claim 1 was amended to incorporate therein the elements of Claims 2 and 3.

Claim 16 was amended to recite that the input element comprises a plurality of package holders in the form of shelves. Support therefor is in the Specification, for example, original Claim 4. Claim 16 was also amended to refer to an element for introducing fluid into and removing fluid from the packages. Support therefor is in the Specification, for example, page 12, lines 2-3.

Claim 24 was amended to indicate that the device, mounted on the frame, for removing the cover on each of the packages exposes an opening thereof. Support therefor is in the Specification, for example, original Claim 48.

Claim 28 was amended to refer to support housings each having a cover and the step of removing the covers. Support therefor is in the Specification, for example, original Claim 48.

Claim 33 was amended to refer to a microarray of polynucleotide features. Support therefor is in the Specification, for example, page 3, line 1.

Claim 43 was amended to correct a typographical error and was also amended in a manner similar to that for Claim 1.

Claim 45 was amended to indicate that the input element and the output element each comprise a plurality of shelves. Support therefor is in the Specification, for example, original Claim 4.

Claims 48 and 49 have been amended to recite microarray. Support therefor is in the Specification, for example, page 3, line 1. Claim 48 was also amended in the preamble to recite a method of preparing a microarray for scanning. Support therefor is in the Specification, for example, page 11, lines 15-22. Claim 48 was also amended to recite that a wash fluid is applied to the microarray through the opening and also that the wash fluid is removed through the opening and the microarray is dried prior to scanning the microarray. Support therefor is in the Specification, for example, page 13, lines 1-3.

Claim 50 was amended to incorporate the subject matter of Claim 51.

Claim 53 was amended to recite that the nozzle for applying fluid is the same as the nozzle for removing fluid. This amendment clarifies the claim.

Rejection under 35 U.S.C. §103

Claims 48-53 were rejected under paragraph (a) of the above code section as being unpatentable over Holen, *et al.*, U.S. Patent No. 5,320,808 (Holen). The Holen reference discloses a reaction cartridge and carousel for a semi-automated biological sample analyzer that includes sub-systems to simultaneously perform a plurality of enzyme immunoassays for human IgE class antibodies specific to a panel of preselected allergens in each of a plurality of biological samples. The reaction cartridges include a test card that includes an array of test sites. The test card is contained in a reaction well that is provided with a removable cover and a reagent port for delivery and removal of fluids to and from the reaction well. The test sites on the test card are typically about 0.1 inches in diameter and separated by a moat that is 0.01 inches across.

Claim 48 is directed to a method of preparing a microarray of biopolymers for scanning wherein the microarray is contained in a housing having a cover. The cover of the housing is removed to expose an opening of the housing. Wash fluid is applied to the microarray through the opening, the wash fluid is removed through the opening, and the microarray is dried prior to scanning the microarray.

The Examiner recognizes that Holen does not teach removing the cover of his cartridge prior to adding fluids. However, contends the Examiner, it would have been obvious to one of ordinary skill in the art that removal of the cover to add fluid was possible if one were not concerned with the sealing advantages taught by Holen.

Applicant respectfully traverses the above rejection. The issue is not whether removal of the cover would be possible. The issue is whether it would have been obvious to one of ordinary skill in the art, based on the teaching of Holen, to remove the cover to add fluid through the opening and further to remove fluid through the opening and dry the microarray prior to scanning. Applicant submits that it would not have been obvious to the skilled artisan. Holen's teaching is directly contrary to such a concept. Even though Holen states that his cover may be removable, Holen does not remove it for the application and removal of fluid to and from the cartridge. As a matter of fact, Holen goes to great lengths to make sure that the cover provides a good seal during the addition and removal of fluids to and from his cartridge (column 10, lines 4-9, for example) and uses probes and pumps for addition and removal of fluids. Furthermore, Holen is not concerned with microarrays as is Claim 48 and those dependent thereon.

Another point is that Applicant's specification distinguishes the invention of Claim 48 from known approaches. At page 11, lines 15-22, Applicant indicates that the embodiment disclosed differs significantly from known support housings in that in the present embodiment the support housing is opened for washing. Finally, Holen does not teach or suggest removing the wash fluid and drying the microarray prior to scanning. Scanning microarrays for the results of, for example, hybridization reactions, generally requires different considerations than examining a test card such as Holen's for the results of an immunoassay. As indicated in Applicant's specification, scanning of microarrays contained in packages or support housings is generally a wet scan (page 11, lines 15-22). As a result of Applicant's invention, one can use scanning techniques applicable to dry microarrays for microarrays contained in a package or covered support housing.

Claims 1-47 were rejected under paragraph (a) of the above code section as being unpatentable over Holen as applied to Claims 48-53 further in view of Panetz, *et al.*, U.S. Patent No. 5,585,088 (Panetz). Panetz teaches an apparatus for automatically separating at least one compound from a plurality or discrete liquid specimens. One embodiment utilizes sample preparation columns that are automatically fed to a column transport disc. The transport disc is preferably provided with compound bores that allow the columns to be easily positioned, transported past a plurality of reagent/gas dispense stations, and ejected after use.

The Examiner contends that it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate input and output means into the Holen device and method because of the reduced operator interface with the device, reduced contamination and the ability for continuous operation of the device as taught by Panetz.

Without acquiescing in the Examiner's proposed motivation for making the combination of the teachings of the references as the Examiner has done, Applicant submits that the combined teachings do not yield the claimed inventions. With regard to Claim 1, the combined teachings do not suggest an apparatus that comprises an element for removing a cover from a support housing to expose an opening therein. Panetz is silent on such an element and Holen may be argued as teaching away from such an element. With regard to Claim 16, the combined teachings of the references do not suggest an input element comprising a plurality of package holders in the form of shelves.

Claim 24 is not suggested by the combined teachings of the references because the combined teachings do not suggest an apparatus that comprises an element for removing a cover from a package to expose an opening therein. Panetz is silent on such an element and Holen may be argued as teaching away from such an element. Furthermore, the combined teachings of the references do not suggest an input element and an output element each

comprising a plurality of shelves. For Claims 25 and 26, Holen and Panetz do not suggest an apparatus wherein the input element and/or the output element is an elevator system.

The combined teachings do not suggest the invention of Claim 28 because the combined teachings do not suggest removing the cover of a support housing to add and remove fluids to and from the support housing. Panetz is silent on such a step and Holen may be argued as teaching away from such an approach.

For reasons similar to those above, the combined teachings of Holen and Panetz do not suggest the method of Claim 33. There is no suggestion of moving a holding device in an indexed manner to move covered packages to a device for removing covers from the covered packages. Furthermore, Claim 33 is concerned with processing supports having surfaces with microarrays of polynucleotides. With regard to Claims 34 and 35, the combined teachings of the references do not suggest an input element and an output element, respectively, each comprising a plurality of shelves.

For reasons similar to those discussed above for Claim 24, the combined teachings of the references do not suggest the embodiments of Claim 43. Furthermore, the combined teachings of the references do not suggest the embodiments of Claim 45 because the combined teachings do not suggest an input element and an output element each comprising a plurality of shelves.

#### Formal Drawings

Formal drawings are being submitted to the Official Draftsperson along with a separate Drawing Transmittal Letter.

#### Conclusion

Claims 1, 4-50 and 52-53 satisfy the requirements of 35 U.S.C. 103. Allowance of the above-identified patent application, it is submitted, is in order.

Respectfully submitted,



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